

*Installation and Environmental Management Guide for
Aboveground Domestic Oil Tanks
in Nova Scotia*

Version Control:	Replaces: This is an New Document
	Latest revision: N/A

INSTALLATION AND ENVIRONMENTAL MANAGEMENT GUIDE FOR ABOVEGROUND DOMESTIC OIL STORAGE TANKS IN NOVA SCOTIA

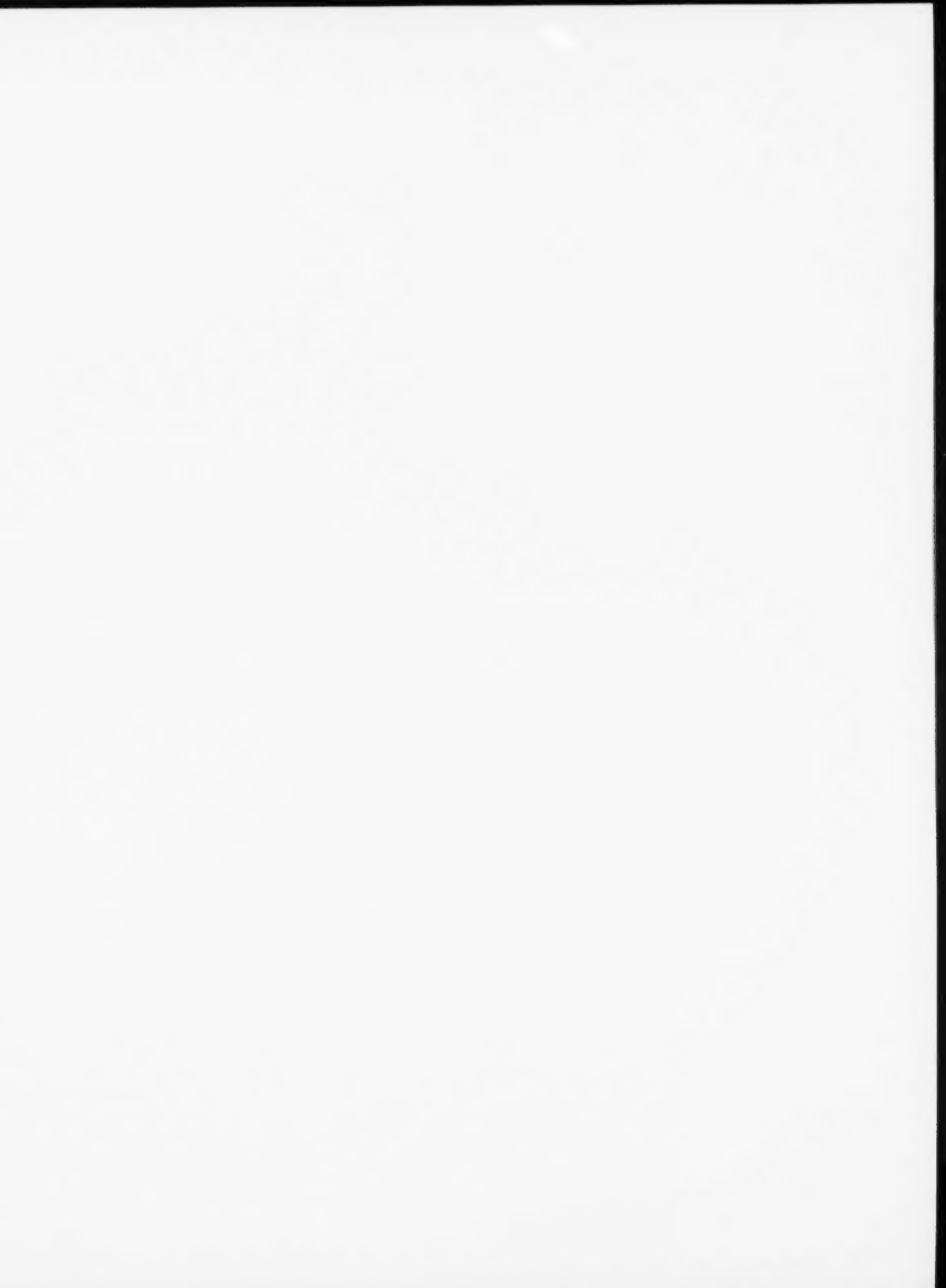
TABLE OF CONTENTS

1.0	Scope	1
2.0	Background	1
3.0	Recommended Installation and Maintenance Principles	2
3.1	Installations	2
3.2	Use of Refurbished Tanks	2
3.3	Tank Movement and Levelling	2
3.4	Transfer of Old Product	2
3.5	Tank System Upgrade and Replacement Options	3
3.5.1	Tank Options	3
3.5.2	Tank Outlet Options	3
3.5.3	Product Supply System Options	3
4.0	Tank Labels	4
5.0	Installation	4
5.1	Indoor Installations	4
5.1.1	General	4
5.1.2	Installation	5
5.2	Outdoor Installations	7
5.2.1	General	7
5.2.2	Protection from Vehicle Traffic	7
5.2.3	Tank Stability	8
5.2.4	Flooding and/or High Wind Areas	8
5.3	Fill and Vent Piping	10

5.3.1	Vent Piping	10
5.3.2	Fill Piping	10
5.3.3	Overfill Protection	11
5.3.4	Oil Level Gauge	11
5.4	Product Supply Lines	11
5.4.1	General	11
5.4.2	Outside Product Supply Line Considerations	12
5.5	Post Installation Testing	13
5.6	Additional Manufacturer/Supplier Information	13
5.7	Reporting Spills	13

Figures:

Figure 1	Typical Inside Tank Installations	6
Figure 2	Typical Outside Tank Installations	9



INSTALLATION AND ENVIRONMENTAL MANAGEMENT GUIDE FOR ABOVEGROUND DOMESTIC OIL STORAGE TANKS IN NOVA SCOTIA

1.0 SCOPE

This guide applies to the installation and environmental management of domestic aboveground fuel oil storage tanks constructed to CAN/ULC-S602, "Standard for Aboveground Steel Tanks for Fuel Oil and Lubricating Oil" as revised, amended or substituted; or ULC/ORD C80.1, "Aboveground Non-Metallic Tanks for Fuel Oil" as revised, amended or substituted.

The guide does not apply to aboveground fuel oil tank systems having a nominal capacity of 2500 Litres (550 imp gallons) or greater. Tank systems having a nominal capacity in excess of 2500 Litres (550 imp gallons) but less than 4000 Litres (880 Imp Gallons) are to be installed in accordance with the Canadian Standards Association's CSA B-139, latest recognized edition, "Installation Code for Oil Burning Equipment" and the "National Fire Code of Canada", latest edition. Tank systems having a nominal capacity in excess of 4000 L are regulated through the Nova Scotia Petroleum Management Regulations.

Unless otherwise specified, all provisions, including separation distances and dimensions, referenced in this Guide preceded by the word "shall" are based on the 2000 edition of the Canadian Standards Association's CSA B-139, "Installation Code for Oil Burning Equipment".

When there is deemed to be a conflict between the provisions of this Guide and any other provisions stated in a Manufacturer's Tank Installation Guide, the more stringent should apply.

Note: At the time of publication of this Guide, the current recognized edition¹ of the Canadian Standards Association's CSA B-139, "Installation Code for Oil Burning Equipment" is the 2000 edition. In the event a revised, amended, or substituted version of the B139 is adopted, then the provisions of the latest edition would apply.

2.0 BACKGROUND

Domestic fuel oil storage tanks have been in use for more than fifty years in Nova Scotia. Properly installed and maintained they can offer years of safe fuel storage. However, in the past, many tank installations and maintenance practices (or lack thereof) actually caused tank systems to fail well before their potential life expectancy had been reached. In fact, each year in Nova Scotia there are hundreds of oil spills from domestic oil tanks resulting from overfilling, improper tank location, and improper installation and/or maintenance. Domestic fuel oil spills account for a significant amount of all pollution incidents reported to the Department.

Oil from a leaking tank can result in the contamination of surrounding soil and/or groundwater on a property or adjacent properties. Releases may affect drinking water supplies or result in petroleum vapours. Odours can often enter dwellings through the sewer system or through foundation walls and floors. The costs to clean up these spills can range from several thousand to several hundred thousand dollars, and there is the added disruption and inconvenience caused by the cleanup.

If not properly installed and maintained, the domestic heating oil tank found at most Nova Scotian homes has the potential to affect human health, the environment, and become a financial liability.

¹ As recognized by the Public Safety Division of Nova Scotia Environment & Labour

3.0 RECOMMENDED INSTALLATION AND MAINTENANCE PRINCIPLES

3.1 INSTALLATIONS

Regardless of location, proper installation and maintenance of the domestic fuel oil tank is critical. History has shown that indoor tanks are less likely to leak when compared to tanks installed outside. This is likely due to tank exposure to weather, which may cause corrosion and settlement problems due to frost heaving in the case of outdoor installations.

3.2 USE OF REFURBISHED TANKS

The use of used or "refurbished tanks" should be avoided. Any tank that has been removed has been replaced for a reason. Often the "refurbished tank" was either leaking at another site or was replaced due to the age of the tank to prevent a spill from occurring. Re-use is simply inviting problems and a likely release.

CAUTION: Re-using tanks should be avoided.

3.3 TANK MOVEMENT AND LEVELLING

Tank(s) must always be handled without dropping or dragging.

Any tank(s) that have settled should have the elevation adjusted by a qualified installer as soon as possible.

Tank(s) must never be moved without emptying the tank as much as practical.

Tanks shipped from a manufacturer's factory typically come with tank opening caps or plugs to protect the fitting threads. All caps/plugs should be removed and the tank should not be filled unless all openings are either in use or properly sealed. Any condensation or ice formed in the tank during shipping and storage should be removed from the tank prior to installing any fittings or plugs.

3.4 TRANSFER OF OLD PRODUCT

Premature tank system failures may be caused by a transfer of product from the old tank. Any transfer of product from an old tank to a new tank should be avoided. New steel tanks are initially more susceptible to corrosion caused by the presence of sludge, acids, microorganisms and water. Transfer of these contaminants can result in premature failure of a steel tank in as little as eight months.

CAUTION: The transfer of product from an old tank to a new tank should be avoided.

If fuel transfer cannot be avoided, follow the tank manufacturers recommended practices for fuel oil pump over or transfer. Fuel transfer should only be carried out by a qualified installer or by a heating oil provider. If possible, plan ahead and burn down the existing fuel in the old tank before replacing the tank in order to minimize the volume of fuel that is transferred. The remaining sludge and water must be disposed of at a facility equipped to handle this waste in an environmentally acceptable manner. Your heating oil provider will be able to provide some guidance on possible disposal options.

RECOMMENDATION: Use only new fuel when re-filling a tank after replacement.

3.5 TANK SYSTEM UPGRADE AND REPLACEMENT OPTIONS

3.5.1 Tank Options

Domestic oil tanks are not designed to last forever and must be properly maintained and replaced after their effective service life. Life expectancy can be affected by the tank material and configuration of the tank.

There are several technologies that manufacturers use to produce tanks that have a longer life. These include double walled tanks, fiberglass tanks, composite plastic/metal tanks, lined tanks, stainless steel tanks and heavier wall 2.5 mm (12 gauge) steel tanks. The minimum nominal steel sheet thickness used in the fabrication of steel tanks should be at least 2.0 mm. Some tanks come with their own insurance policy against environmental impairment. It is recommended that these options be investigated when purchasing a new or replacement tank. Initial tank costs may be higher, but tank service life is usually longer.

RECOMMENDATION: Use a tank constructed of the best available materials. Consider tanks which are protected from internal corrosion (e.g. constructed or lined with non-corrosive materials) and/or incorporates secondary containment technology.

3.5.2 Tank Outlet Options

There are three basic outlet types associated with domestic fuel oil tanks - top, end, and bottom outlet. Top outlet tanks typically rely on a combination of siphoning/oil pump action to draw oil to the heating appliance burner while end and bottom outlet tanks typically use a combination of gravity feed/oil pump action to deliver the fuel to the burner.

RECOMMENDATION: Homeowners should consult with the tank supplier or manufacturer to evaluate the options with respect to the various outlet types. The proposed location of the tank may affect which option is best.

3.5.3 Product Supply System Options

Vulnerable components of a domestic heating oil storage tank system are the product supply lines and associated valves, fittings and filters.

Due to their design, tanks with top outlets, and to a lesser extent tanks with end outlets, are prone to an accumulation of contaminants such as water or sludge in the bottom of the tank and must be managed in conjunction with a water/contaminants removal program as part of regular tank maintenance. This is a greater concern for unprotected steel tanks (i.e. tanks not constructed or lined with non-corrosive materials) as this condition, left unattended, will lead to accelerated corrosion.

Bottom outlet tanks are designed so that any contaminants that enter the tank drain out of the bottom outlet with the fuel to the supply line filter(s). However, these types of systems must be installed so that the tank and the supply lines are tilted toward the burner to prevent the accumulation of contaminants in any low areas. If not installed correctly, there is the possibility that any water or contaminants that accumulate in outside located supply lines will freeze resulting in either a failure of the heating appliance to operate properly, or the splitting of lines and a loss of fuel.

One concern associated with any outlet type is that a failure in the supply line could result in all the fuel in the tank leaking out, due to gravity and/or siphoning action. These types of losses can be minimized through the installation of an anti-siphon valve or an oil safety valve. Properly located and installed, these valves are designed to automatically prevent fuel, in the event of a product supply line failure, from siphoning or draining from the tank.

RECOMMENDATION: Oil tanks constructed or lined with a non-corrosive material may use any outlet type option. For unprotected steel tank systems, a bottom outlet system is recommended.

4.0 TANK LABELS

All aboveground fuel oil tanks are to be installed bearing a visible label:

- a) in accordance with the National Standard of Canada CAN 4-S602, latest edition, "Standard for Aboveground Steel Tanks for Fuel Oil and Lubricating Oil" as revised, amended or substituted; or
- b) in accordance with the National Standard of Canada ULC/ORD C80.1, latest edition, "Aboveground Non-Metallic Tanks for Fuel Oil" as revised, amended or substituted.

CAUTION: Only tanks bearing a label showing construction to an acceptable national standard should be installed.

5.0 INSTALLATION

Domestic fuel oil tanks are to be installed in accordance with the Canadian Standards Association's CSA B-139, latest recognized edition, "Installation Code for Oil Burning Equipment" and the "National Fire Code of Canada", latest edition.

Do-it yourself installations are discouraged due to potential damage to the environment, and consequential high costs of cleanup associated with any spill. In fact, many manufacturers now require for warranty purposes that oil tank systems are installed by trained installers.

RECOMMENDATION: New tank systems should be installed by trained oil tank system installers.

5.1 INDOOR INSTALLATIONS

5.1.1 General

Given current information, indoor installations are encouraged over outdoor installations whenever feasible, for some of the following reasons:

- a) A poured concrete basement floor provides the best option for a strong, stable and solid base for the tank.
- b) There should be no odours from a properly installed inside tank. If the tank begins to weep from internal corrosion, early detection from odours is more likely with an indoor tank than with one located outside. Early detection can save thousands of dollars in cleanup and environmental costs.

- c) Inside tanks are not subjected to the elements including extreme temperatures, rain, snow, ice, external corrosion, condensation (which leads to internal corrosion) as well as vandalism. All of these factors contribute to a reduced life expectancy, higher maintenance costs and a greater possibility of an oil spill occurring.
- d) Inside tanks are not subjected to frozen product lines.
- e) Inside tanks provide better performance and less maintenance for oil heating systems because the fuel is kept at a constant temperature.

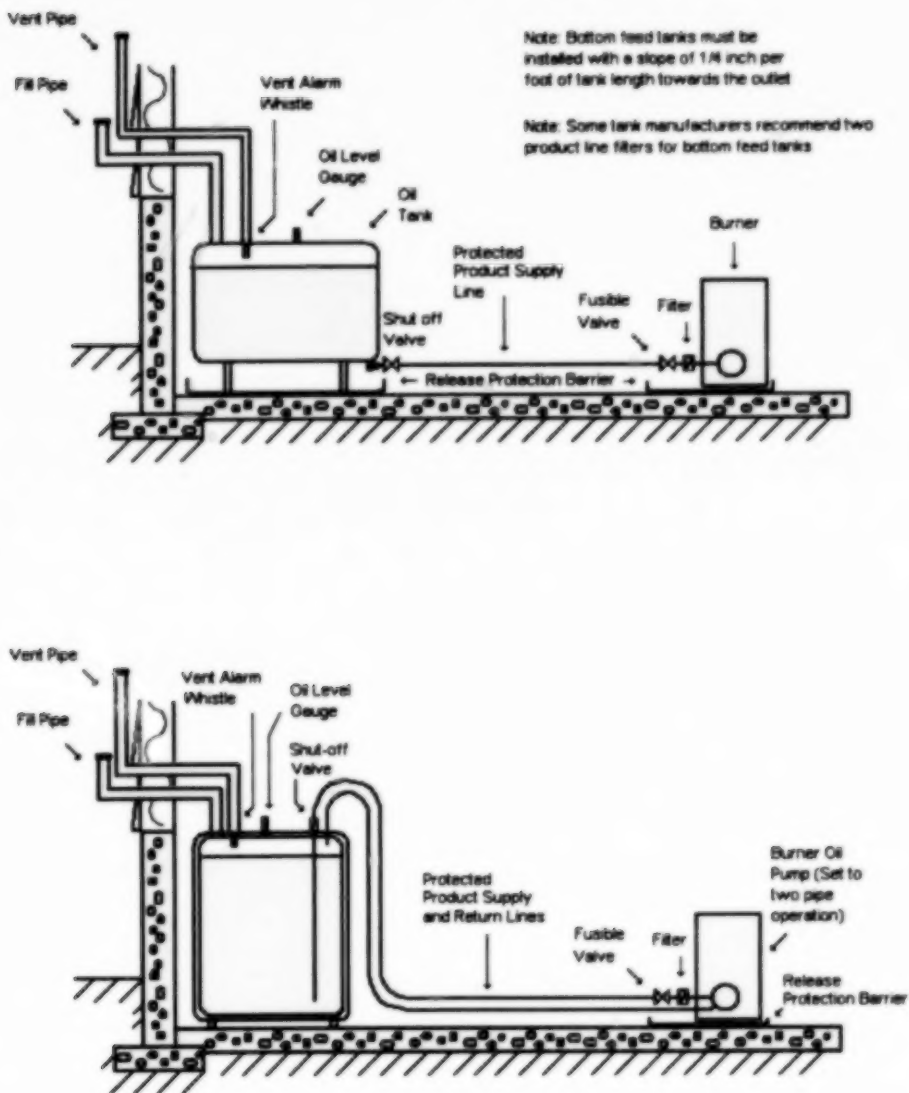
RECOMMENDATION: Indoor installations are encouraged over outdoor installations whenever feasible.

5.1.2 Inside Installations

- a) Inside tank(s) shall be located not less than 1.5 m (5 feet)² from any fuel-fired appliance. Consult the Canadian Standards Association's CSA B-139, latest recognized edition, "Installation Code for Oil Burning Equipment" for information on variances to this requirement.
- b) The tank shall be located so that the temperature of the oil does not exceed 38 °C (100 °F)².
- c) Tanks located in garage bays shall be provided with adequate protection from vehicular traffic².
- d) The supply line and filter shall be protected from damage².
- e) The tank should be placed in an area where it is unlikely to be adversely affected by normal household activities.
- f) Tanks should be placed in an area where they can be visually inspected from all sides. For single walled tanks and double walled tanks without interstitial monitoring, the Department recommends that a minimum separation of 100 mm (4 in) from two walls, 450 mm (18 in) from any remaining walls, and a clearance of 100 mm (4 in) beneath the tank is maintained.
- g) When tanks are installed side by side, the space between the tanks should be at least 100 mm (4 in).
- h) If feasible, a low curb, dyke or drip tray should be installed with any single walled indoor tank in order to contain any leaked product.
- i) Inside tanks installed in areas subject to flooding should follow the recommendations for outside tanks with regard to anchoring (See Section 5.2.4).
- j) Tanks should be installed on the lowest floor of the building. The exception to this would be if the tank is installed in an attached garage that is not the lowest floor.
- k) If feasible, any existing floor drains, sumps or other openings located near the tank should be sealed in such a manner to prevent the escape of any spills from the tank.

² As stated in CSA B-139 Installation Code for Oil Burning Equipment, 2000 Edition
 Installation and Environmental Management Guide for Aboveground Domestic Oil Tanks in Nova Scotia

Figure 1 Typical Inside Tank Installations



Figures are not to scale.

5.2 OUTDOOR INSTALLATIONS

5.2.1 General

Aboveground outside tanks should be located in conformance with the following:

- a) Tanks must not block building entrances or windows including basement windows.
- b) Consult the Canadian Standards Association's CSA B-139, latest recognized edition, "Installation Code for Oil Burning Equipment" and the "National Fire Code of Canada", latest edition, for separation distances to other energy source connection lines or storage systems (i.e. propane cylinders).
- c) Tank(s) with a 1,150 L (250 gallon) capacity or less shall be not less than 1.5 m (5 feet)² from a property line unless otherwise specified by the local municipal authority having jurisdiction over the Canadian Standards Association's CSA B-139, "Installation Code for Oil Burning Equipment" and the "National Fire Code of Canada".
- d) Tank(s) over 1,150 L (250 gallon) capacity shall be not less than 3 m (10 feet)² from a property line unless otherwise specified by the local municipal authority having jurisdiction over the Canadian Standards Association's CSA B-139, "Installation Code for Oil Burning Equipment" and the "National Fire Code of Canada".
- e) The tank(s) should be located down grade from any domestic drinking water well if possible.
- f) Tanks should not be located directly under house eaves where they may be subject to falling snow and icicles or increased external pitting from dripping water.
- g) Tanks should not be placed in intimate contact with the building since leaves and other organic matter can accumulate and cause external corrosion of the tank.
- h) Tanks should be installed with sufficient clearances to permit the application of protective coatings (i.e. rust proof paint) to all sides of the tank.
- i) The fuel tank gauge should be equipped with a heavy steel gauge protector to protect the gauge from falling ice/snow and vandalism. Some commercial grade fuel tank gauges have this safety feature built in as part of their design. Aftermarket protectors are available from several manufacturers. Consult page 13 for information to locate tank supply companies.
- j) Tanks should be installed in such a manner that any spills that may result from the tank will drain away from the house foundation.

5.2.2 Protection from Vehicle Traffic

Tanks located in areas exposed to vehicular traffic (i.e. driveways, garage) should be provided with adequate protection such as posts or guardrails. This protection should:

- i) extend at least 750 mm (30 in) above grade;
- ii) be not less than 0.9 m (3 ft) from all sides of the tank; and
- iii) be located in such a manner to ensure that a minimum of 3 m (10 ft) will be maintained between the point of transfer and any source of ignition, including vehicles.

² As stated in CSA B-139 Installation Code for Oil Burning Equipment, 2000 Edition
Installation and Environmental Management Guide for Aboveground Domestic Oil Tanks in Nova Scotia

5.2.3 Tank Stability

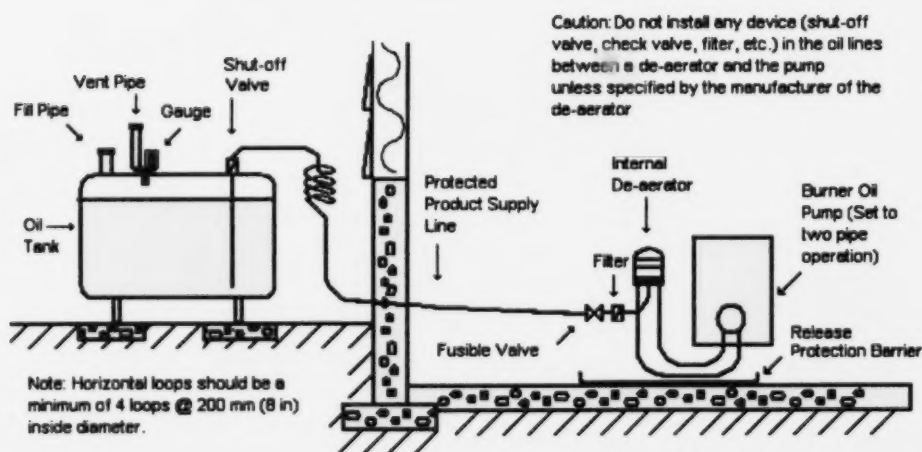
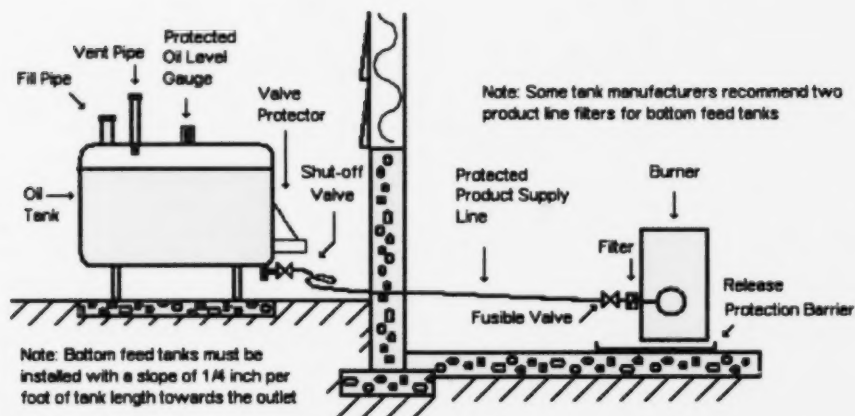
- a) All outdoor tank(s) are at risk for movement as the result of seasonal weather conditions which can cause ground shifts and frost heaves, especially new installations placed on recently disturbed ground. This includes newly constructed homes where new installations are carried out on back fill material against house foundations. Special attention must be given during these installations to ensure proper stability to support the weight of the tank plus the fuel for a total weight of about 1000 kg (1 ton). Therefore, all outside tanks should be installed on a prepared bedding surface with all organic materials such as sod or bark removed.
- b) The tank(s) should be properly supported and the legs centered to prevent it from shifting, settling, or falling over. The aboveground outside tank support legs should be installed on a concrete pad(s) or reinforced patio stones (see Figure 2). Tank cradles are not recommended unless designed by a professional engineer. A tank stability bracket can also help protect the tank from accidental upset and vandalism. Some tank suppliers and accessory manufacturers can supply custom brackets for the tank. Consult page 13 for information to locate tank supply companies.
- c) A well drained sub grade should also be utilized to provide appropriate drainage. 100-150 mm (4-6 in) of clear stone is suggested.
- d) Cross connected tanks must be placed on the same pad. Patio blocks cannot be used for twinned tanks. This pad should be designed and constructed so as not to be affected by frost movement.
- e) New outdoor tank installations must be inspected regularly after installation to ensure that the tank has not moved.

CAUTION: Tanks must be properly supported to prevent shifting, settling, or tipping over.

5.2.4 Flooding and/or High Wind Areas

Additional stability should be considered in areas subject to flooding and/or high winds. This will require some form of shelter or anchoring that does not adversely affect the operation of the tank (e.g. if using a bracket or strap attached to a support, ensure that the bracket or strap does not cause chafing or increased corrosion).

Figure 2 Typical Outside Tank Installations



Outside Installation Notes:

1. Install a stable base (ex. poured concrete slab or reinforced patio stones)
2. Install a horizontal loop (sloped down) in oil feed line to allow minor tank movement
3. Install a guard to protect product supply line
4. Install a guard to protect oil level gauge

Figures are not to scale.

5.3 FILL AND VENT PIPING

5.3.1 Vent Piping

Consult the Canadian Standards Association's CSA B-139, latest recognized edition, "Installation Code for Oil Burning Equipment" and the "National Fire Code of Canada", latest edition, for all material specifications and installation requirements for tank venting, including requirements for cross connected tanks. In addition, all venting of tanks should conform to the following requirements:

- a) The vent pipe material should be schedule 40 black steel pipe.
- b) Threaded joints in the vent piping shall be made fuel oil-tight using joint compound conforming to CAN/ULC-S642-M, "Compounds and Tapes for Threaded Pipe Joint" approved for this purpose².
- c) Vent pipe shall never be less than 30 mm (1¼ in)² nominal diameter for single tank installation. Proper vent sizing is essential to prevent abnormal pressure or vacuum within the tank caused by filling or emptying. Consult the CSA B-139, latest recognized edition, "Installation Code for Oil Burning Equipment" and the "National Fire Code of Canada", latest edition, for tank vent sizing specifications.
- d) All tank(s) shall be connected to a vent alarm or whistle which is an effective means of preventing overfilling². The vent alarm or whistles should be sized to allow for an adequate fuel expansion safety volume as determined by the tank manufacturer.
- e) The vent pipe shall drain towards the tank (minimum slope of 1%) without traps where liquid can collect².
- f) The lower end of the vent pipe shall enter the tank from the top and shall extend into the tank not more than 25 mm (1 in)².
- g) Vent pipe outlet shall terminate to open air outside buildings and not be less than 600 mm (2 feet)² from any building opening, intake vent or electrical base meter.
- h) The vent pipe shall be provided with a weatherproof vent cap which should have a minimum free open area at least equal to the cross-sectional area of the vent pipe. The vent cap should have a screen that does not reduce the vent area to prevent the ingress of foreign objects.
- i) The vent pipe shall extend at least 2 m (6 ½ feet)² from the ground surface and shall not be located more than 600 mm (2 feet)² horizontally from the entry of the fill pipe.
- j) The vent pipe should terminate at an elevation at least 150 mm (6 inches) above the entry to the fill pipe.

5.3.2 Fill Piping

Consult the Canadian Standards Association's CSA B-139, latest recognized edition, "Installation Code for Oil Burning Equipment" and the "National Fire Code of Canada", latest edition, for all material specifications and installation requirements for pipe connections, including requirements for cross connected tanks. In addition, all pipe connections of tanks should conform to the following requirements

- a) The fill pipe shall never be less than 50 mm (2 in)² nominal diameter

² As stated in CSA B-139 Installation Code for Oil Burning Equipment, 2000 Edition

- b) The fill pipe material should be schedule 40 black steel pipe.
- c) Threaded joints in the fill piping shall be made fuel oil-tight using joint compound conforming to CAN/ULC-S642-M, "Compounds and Tapes for Threaded Pipe Joints" approved for this purpose¹.
- d) A fill pipe with an entry adjacent to a building shall be installed so that the entry shall be:²
 - i) close to the wall;
 - ii) not less than 610 mm (2 feet) from any building opening;
 - iii) not above the vertical projection of any window or building opening at a lower elevation than the entry to the fill pipe; and
 - iv) at an elevation lower than the termination of the vent pipe.
- e) The fill pipe opening shall be equipped with a tight metal cover designed to discourage tampering².
- f) In the case of cross connected tanks, the size of the cross connected fill pipe shall not be less than the size of the fill pipe (minimum 50 mm (2 in))².
- g) The fill pipe should terminate at least 900 mm (3 ft) above grade. This should be increased in areas of high snowfall.
- h) The fill pipe should drain towards the tank (minimum slope of 1%) without traps where liquid can collect.

5.3.3 Overfill Protection

- a) All tank(s) shall be connected to a vent alarm or whistle which is an effective means of preventing overfilling².

CAUTION: During filling if there is no vent whistle sound fuel delivery should immediately cease.

5.3.4 Oil Level Gauge

- a) All tank(s) should be installed with an oil level gauge in order to determine the liquid level within the tank.

5.4 PRODUCT SUPPLY LINES

5.4.1 General

- a) Inside supply lines shall be a minimum of 10mm (3/8 inch)² outside diameter.
- b) All connections in copper piping and tubing should be made visible, accessible and made fuel oil-tight using a flared joint.
- c) Product piping connections at any level below the highest level to which the liquid in the tank will rise should be provided with an shut-off valve (ideally a steel ball valve or gate valve)

² As stated in CSA B-139 Installation Code for Oil Burning Equipment, 2000 Edition
Installation and Environmental Management Guide for Aboveground Domestic Oil Tanks in Nova Scotia

located as close as practicable to the tank shell. This will allow the fuel supply to the heating appliance to be shut off without excessive draining of fuel.

- d) Product filters should:
 - i) be installed inside the building,
 - ii) have sufficient clearance to allow for replacement or repair, and;
 - iii) located as close as practicable either to the tank or the heating appliance burner
- e) A fusible valve (i.e. fire valve) should be installed in the burner supply line if the heating appliance burner pump does not come equipped with an automatic shut off feature in the event of a fire.
- f) Burying product piping is not recommended since concrete can corrode copper lines, allowing fuel to leak and not be noticed. When burying is necessary for line safety from traffic, consult the Canadian Standards Association's CSA B-139, latest recognized edition, "Installation Code for Oil Burning Equipment" for all material specifications and installation requirements for underground and/or sub-floor piping.
- g) The supply line(s) should be run as directly as practicable.
- h) When a de-aerator device is utilized, any purged air from the device should be vented to the outside of the building, if possible.

5.4.2 Outside Product Supply Lines Considerations

- a) The product supply line(s) leading from the tank to the building should be protected (i.e. sleeved) from physical damage including the weight of snow, ice or other objects which could cause the line to pinch or break and release product. Heaving frost or an application of force as little as 9 kg (20 lb) can snap the supply line. A supply line cover can also deter vandalism. Some tank manufacturers can supply custom covers for the valve. Consult page 13 for information to locate tank supply companies.

RECOMMENDATION: Use product supply lines that come equipped with a protective covering such as grooved polyethylene copper tubing.

- b) On bottom outlet tanks, the product supply lines should be installed on an decline (downward slope) from the tank to the building to prevent the accumulation of water and possible freezing of the product line.
- c) To allow for frost heaving and movement, the supply line should have a minimum of one horizontal loop before entering the building (see Figure 2).
- d) On product supply lines from outside tanks two shut-off valves should be installed, one outside located as close as practicable to the tank shell, and one inside before the heating appliance burner. Note: a shut-off valve may not be required at the tank shell location in the case of a top feed system where the product line is equipped with an anti-siphon valve.
- e) Outside product supply lines shall not be less than 10mm (3/8 inch)² outside diameter. However, the Department recommends the industry practice of installing a larger diameter product supply line (a minimum of 13mm (1/2in) outside diameter) on the outside of the house to reduce the potential for freezing.

² As stated in CSA B-139 Installation Code for Oil Burning Equipment, 2000 Edition

RECOMMENDATION: Outside product supply lines should be a minimum of 13mm (½in) outside diameter.

5.5 POST INSTALLATION TESTING

- a) As a minimum, a tank should be tested by visually checking all seams and fittings for leakage immediately after the first filling. The installer or the fuel oil provider should be in attendance for the first fill up to ensure there are no leaks in the system.

RECOMMENDATION: Use only new fuel when using the fill testing method.

- b) Preferably, fuel oil tanks should be tested for leaks before oil is put into the tank using a pneumatic test (pressure test).

CAUTION: Excessive pressure may damage a tank system and cause premature failure. Pneumatic testing should only be conducted using the tank manufacturers specified pressures and procedures. Testing should only be conducted by a trained installer.

- c) A pneumatic test will assist an installer in confirming:
 - i) manufacturing defects;
 - ii) damage that occurred during shipping and handling of the tank; and
 - iii) leaks in seams and fittings (including seams in vent piping);

5.6 ADDITIONAL MANUFACTURER/SUPPLIER INFORMATION

For additional information regarding domestic fuel oil tanks, contact the tank supply companies (which can be located in the Yellow Pages under tanks or heating), fuel oil supply companies, or the Canadian Oil Heat Association.

5.7 REPORTING SPILLS

Spills or releases of furnace oil to the environment in quantities greater than 100 litres or that may cause an adverse effect must be reported by contacting the environmental emergency number at 1-800-565-1633.

